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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/613,563 | 07/02/2003 | Zongwen Liao | T-1239 | 5482 |
| 802 | 7590 | 10/04/2005 | EXAMINER | |
| DELLETT AND WALTERS P. O. BOX 2786 PORTLAND, OR 97208-2786 | | | SAYALA, CHHAYA D | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1761 | |

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/613,563

Applicant(s)

LIAO ET AL.

Examiner

C. SAYALA

Art Unit

1761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 3, 5, 7-10, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Detroit (US Patent 4846871 or 5041153).

Detroit teaches grinding ammonium phosphate in 30% water (example II) and adding up to 5 wt% lignosulfonate to the fertilizer solution and then prilling the mixture. See col. 3, lines 10-70 in '153. (The disclosure of '871 is similar). See claims 6 and 8, which teach the embodiment of the present claims. See Example III which teaches granulation of the mixture of DAP and lignosulfonate.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1761

2. Claims 1, 3-5, 7-10, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischbein et al. (US Patent 5360465).

The patent teaches grinding ammonium phosphate to a fine powder, prewetted, and mixing it with lignosulfonate in a high shear mixing device. The mixture is then granulated, dried and ground to the required size. See col. 3, lines 15+. Note the concentration of lignosulfonate at col. 4, lines 26. Also see the ratio of lignosulfonate to water at line 55-56 in col. 3. The patent does not teach a "slurry" or the amount of water obtained after mixing. However, the product obtained after granulation is dried. Furthermore, the patent controls the size of the granules of the product by controlling the water content. See col. 37-44. therefore even though the claims use a "slurry" and control the water content before granulation and the patent controls water by controlling the wetting of the mixture and drying after the granulation, the steps are obvious, no specific order in steps being asserted by the claims, and the end product, which is dried granules, are the same and this would have been obvious to the person of ordinary skill in the art at the time the invention was made.

3. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rohwer (US Pub. 2004/0099027) in view of Young (US Patent 3354096), RU 2165912 and Berry et al. (US Patent 4695387) and further in view of CN 1163250.

The Rohwer publication teaches that to a slurry of zeolite (10%), ammonium phosphate solution is added and dried, see page 2, paragraph [0021] and claims. The

Art Unit: 1761

patent does not teach adding the phosphate as a powder, acidifying or that the slurry is granulated.

Young teaches that effective phosphate binding is obtained, at its strongest, at low pH values, between about 3.5 and 6.0 (see col. 4, lines 30-35). The patent teaches a zeolite slurry with ammonium phosphate. The wet mixture is then dried and pelleted (see col. 3, lines 57-62).

RU 2165912 teaches preparing granulating nitrogen phosphorus fertilizer, such as ammonium phosphate by neutralizing ammonia and phosphoric acid with sulfuric acid and applying this to zeolite. The mixture is dried and granulated.

Berry et al. teach that a pH between 4 and 6 is an ideal range of operation for the zeolite adsorbent (see col. 3, lines 48-60), where the ammonia and phosphoric acid are reacted.

CN 1163250 discloses that the zeolite is crushed and compounded with ammonium phosphate and pelletized. It is disclosed as a fertilizer and the composition being synergistic.

To form a slurry from powdered ammonium phosphate would have been an obvious expedient because solutions and slurries are generally formed from solids or powders. To incorporate sulfuric acid with the zeolite would also have been obvious because, it was generally well known in the art at the time the invention was made that a low pH was very effective for zeolite-phosphate binding and the addition of sulfuric acid was also known. Amounts would have been obvious to one of ordinary skill in the art from those shown by the references. See Rohwer et al. in particular.

Response to Arguments

Applicant's arguments filed 8/9/05 have been fully considered but they are not persuasive.

Fishbein et al. is faulted for teaching urea, phosphate and lignosulfonate and for "reducing fugitive dust emission" from granular fertilizers. Such disclosure could not be found in the reference nor is there any urea in this patent and therefore, this traversal is without merit. The patent teaches a controlled release fertilizer. The language 'comprising' of the claims does not exclude the other ingredients.

The Detroit patent teaches 30% water (Example II) and upto about 5% lignosulfonate. That the patent does not disclose the release-controlling property is correct, however, by virtue of the same materials being present and the steps having been met, this feature would have been inherent, barring any evidence to the contrary. A compound and its properties are inseparable.

Applicant's position with respect to the USC 103 rejection over Rohwer etc. is not well taken. Each secondary reference is discussed as being "totally different from the present application" or not "to a controlled release ammonium phosphate fertilizer". All these references are drawn to zeolite compositions; each reference has a pertinent teaching. For instance, Young teaches low pH values are effective to bind phosphate to zeolite, RU teaches preparation of ammonium phosphate by neutralization in the presence of zeolite, and Berry et al. is similar to the RU patent in that it teaches that ammonia is adsorbed on zeolite at a pH 4-6, this being an ideal range for such

Art Unit: 1761

adsorption and then it is reacted with phosphoric acid to give ammonium phosphate. Such disclosure is pertinent art because it teaches one skilled in the art the conditions required for the zeolite to bind the phosphate. There is no requirement in patent law that every reference must be drawn to a controlled release ammonium phosphate fertilizer. One of ordinary skill in the art who is looking to prepare slow release ammonium phosphate by binding to zeolite, would have considered such references that teach conditions of reaction/binding that the primary reference lacks. Therefore, applicant's position is incomprehensible. The combination of references clearly meet the requirement of 35 Usc 103: "such that the subject matter *as a whole* would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." (emphasis added).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

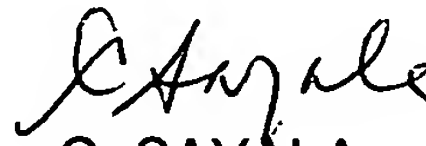
Art Unit: 1761

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. SAYALA whose telephone number is 571-272-1405.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


C. SAYALA
Primary Examiner
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